For Commission Staff Use Only: Tracking #:V-118
Date Received:2/15/08
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Forwarded to:WFC

FINDING AND RECOMMENDATION(S)

Submitted by:__Amy Horne_____

Finding: (*i.e., Conclusions reached after investigation and/or evaluation of facts*)

Resource managers and regulators need tools to objectively evaluate competing risks to humans and the environment to assist them to make decisions that control multiple risks to levels that people accept.

Background and Supporting Evidence: *(A short statement justifying the Finding and describing desired outcome(s); usually no more than half a page.)*

Wildfire in the Tahoe Basin poses a risk to people, communities, lake clarity, fish and wildlife habitat, and other values.[1] Fuel reduction projects to reduce the frequency or severity of wildfire also pose risks. Comparing risks and benefits of fuel reduction projects to risks from severe wildfire require land managers and regulators to analyze and compare short- and long-term environmental effects to different resource values. Because public land managers are currently required to conduct this kind of analysis, analytical tools already exist. The need is to apply these tools to resource management decisions in the Lake Tahoe Basin where authorities are divided among agencies and the tolerances for sediment loading in Lake Tahoe (an Outstanding Natural Resource Water) are tight.

An example of a comparative risk assessment that is needed would compare the potential risk of large-scale erosion caused when rain or snowmelt washes through an area denuded by wildfire to more immediate soil erosion caused by temporary road building and mechanical thinning on sensitive soils.[2]

[1] O'Laughlin, Jay. 2005. Conceptual model for comparative ecological risk assessment of wildfire effects on fish, with and without hazardous fuel treatment. Forest Ecology and Management. 211: 59-72.

[2] O'Laughlin, Jay. 2005. Policy issues relevant to risk assessments, balancing risks, and the National Fire Plan: Needs and Opportunities. Forest Ecology and Management. 211: 3-14.

Another example is prescribed fire, which may reduce fire risk to life and property and improve forest health, but may also conflict with other human health and environmental goals. It may pose a hazard to people with compromised respiration, reduce visibility, increase water runoff, and release nutrients and sediment to soil and water.

Resource managers and regulators need both scientific information and analytical tools to help them evaluate and weigh various risks so that they can achieve an optimal balance of societal goals for people who live in or visit the Tahoe Basin, as well as its environment. Such comparative risk assessments can disclose risk trade-offs and thereby transparently and quantitatively address resource management issues in the Lake Tahoe Basin.

Recommendation(s) *(Based upon an analysis of the Finding, the following recommendation(s) should be made to the Governors):*

Fund the Tahoe Science Consortium to engage analytic experts, public officials, and stakeholders to conduct a comparative risk assessment. This will include shaping the analysis, determining appropriate techniques, and considering how results might be interpreted. Together, they will work through the steps in a comparative risk assessment, which include:[3]

- Formulating the problem. This includes articulating the purpose of the assessment, defining the problem, and planning how to characterize and analyze the risks. Information about sources of risk and their effects are synthesized.
- Developing a conceptual model of the problem situation. This predicts the relationships between the risk factors and their impact on ecological values.
- Selecting Assessment Endpoints. These are explicit definitions of the values to be protected.
- Conduct an analysis. This includes collecting and analyzing data.
- Characterize the risks: Describe the results of the risk integration. This will include a summary of assumptions, scientific uncertainties, and strengths and limitations of the analysis.
- Provide recommendations for future steps

Impacts of Implementation: *(The implementation of any Recommendation is likely to have specific impacts. Consider potential consequences related to each of the following areas)*:

Analysis of impacts on the following factors is REQUIRED (Best Estimate):

☐ Cost

[3] US Environmental Protection Agency (US-EPA), 1998. Guidelines for ecological risk assessment. EPA/630/R-95/002F. Federal Register 63 (93), 26846-26924.

- ☐ Funding source
- ☐ Staffing
- ☐ Existing regulations and/or laws

Analysis of impacts on the following factors is OPTIONAL:

- ☐ Operational
- ☐ Social
- ☐ Political
- ☐ Policy
- ☐ Health and Safety
- ☐ Environmental
- ☐ Interagency